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Noboru Hirano

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WESTERMAN, HATTORI, DANIELS & ADRIAN, LLP
1250 CONNECTICUT AVENUE, NW
SUITE 700
WASHINGTON, DC 20036

EXAMINER

RECEK, JASON D

ART UNIT

PAPER NUMBER

2109

MAIL DATE

DELIVERY MODE

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/524,756

Applicant(s)

HIRANO, NOBORU

Examiner

Jason Recek

Art Unit

2109

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 February 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☒ Claim(s) 1-3 and 6 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 February 2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 11 February 2005.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

This is in response to application 10/524756 filed on February 11th 2005, in which claims 1-12 are presented for examination.

Status of Claims

Claims 1-12 are pending, of which claims 1-3 are in independent form.

Claims 1-3 and 6 are currently objected to.

Claims 1-11 are currently rejected under 35 U.S.C. 112 paragraph 2.

Claims 2, 4 and 11-12 are currently rejected under 35 U.S.C. 102(b).

Claims 1, 3-4 and 5-12 are currently rejected under 35 U.S.C. 103(a).

Specification

1. The disclosure is objected to because of the following informalities: the word "disclosur" is misspelled (pg. 2), also the word "Fstored" is misspelled (pg. 12).

Appropriate correction is required.

Drawings

2. The drawings are objected to because in Fig. 6 the "data expansion/unit" is labeled 4A however the specification references it as 4C. In Figs. 8 and 9 the word from is misspelled as "form". In Fig. 7 the second step shows measuring time Tt(N-1)

Art Unit: 2109

instead of $Tt(N)$ for frame $F(N)$. In Fig. 9 the third step shows calculating reception time $Tr(N)$ / reception time $Tr(N-1)$, this does not correspond to the description of using transmission time and reception time. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

3. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: 4f. Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in

compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Information Disclosure Statement

The IDS filed on February 2nd 2005 lists U.S. Patent 5,477,742 issued to Takahara et al., however U.S. Pat. 5,477,742 is actually issued to Burger and concerns a gear-shifting device for a motor vehicle.

Claim Objections

4. Claim 1 is objected to because of the following informalities: claim 1 recites "the degree of congestion of said data circuit has decreased [...] transmitting the next data frame with an increased picture and sound qualities and/or a *reduced* frame rate" the specification teaches to increase the frame rate when transmission time decreases, thus claim 1 is not in commensurate scope with the specification. Appropriate correction is required.

5. Claim 2 is objected to because of the following informalities: the term "the congestion" should be "the degree of congestion" to have proper antecedent basis.

Appropriate correction is required.

6. Claim 3 is objected to because of the following informalities: the word "lease" is used in place of least (ln. 10). The term "said (data reception time)/(data transmission time)" should be "said ratio ..." to have proper antecedent basis. The phrase "the degree of said data circuit" should be "the degree of congestion of said data circuit" to have proper antecedent basis. Appropriate correction is required.

7. Claim 3 is further objected to because the language does not match the description or drawings in the specification. Claim 3 recites "calculating a ratio (data reception time)/(data transmission time) from the data transmission time for said data communications terminal transmitting frame data to transmit respective data frames that precede the current data frame by at lease one data frame and the data reception time for the data communications terminal receiving frame data to receive respective data frames that precede the current data frame by at least one data frame" however Fig. 9 attempts to show calculating transmitting time for frame (n-1) and calculating reception time for frame (n) then creating a ratio. The claim reads as if using transmitting time (n-1) and reception time (n-1), if so the claim lacks support from the specification.

Furthermore it is not clear how the step of "determining the degree of congestion of said

Art Unit: 2109

data circuit from said (data reception time)/(data transmission time)" is accomplished. If both times are increasing or decreasing simultaneously the ratio will be 1 which would fail to reflect an increase or decrease in network congestion. Appropriate correction is required.

8. Claim 6 is objected to because of the following informalities: the phrase "terminal according claim 2 ..." should be "terminal according to claim 2 ...". Appropriate correction is required.

Claim Rejections - 35 USC § 112

9. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

10. Claims 1-11 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claims 1-3 and 7-11 recite "and/or" multiple times, the phrase and/or is indefinite because it is unclear whether the data quality and the frame rate is reduced or increased or only one variable is reduced or increased, furthermore if only one variable is changed, which one.

11. Claims 1-3 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which

Art Unit: 2109

applicant regards as the invention. Claims 1-3 recite the limitation "the degree" in line eight (line 13 for claim 3). There is insufficient antecedent basis for this limitation in the claims.

12. Claims 1-3 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claims 1-3 recite the limitation "the data transmission time" (claim 1) or "the data reception time" (claim 2) in line eight (claim 3 recites both terms in lines 13 and 15). There is insufficient antecedent basis for these limitation in the claims.

13. Claims 4-7 and 10-12 are rejected because they depend from a rejected claim.

Claim Rejections - 35 USC § 102

14. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

15. Claims 2, 4 and 11-12 are rejected under 35 U.S.C. 102(b) as being anticipated by Yoshinori JP 2001-094981.

Regarding claim 2, Yoshinori discloses "sequentially transferring [...] data frame amounting to one still picture containing compressed image data of variable length and compressed audio data of variable length" as two terminals transmitting in real-time encoded images and voice (pg. 5 paragraph 10), "transmitting a multiplicity of leading data frames with predetermined image and sound qualities" as transmitting encoded data (pg. 5 paragraph 10)-the type of coding selected will determine the quality, "determining the degree of congestion of said data circuit from the data reception time" as a receiving terminal that recognizes the transfer rate (pg. 5 paragraph 10), "making a determination that the degree of congestion of said data circuit has increased [...]" thereby transmitting the next data frame with reduced image and sound qualities" as generating coding conditions which suit reproduction of data (pg. 6 paragraph 15), and "making a determination that the congestion of said data circuit has decreased [...]" thereby transmitting the next data frame with increased image and sound qualities" as generating coding conditions which suit reproduction of data and transmitting them to the transmitting terminal which carries out such coding conditions (pg. 6 paragraph 15).

Regarding claim 4 depending from claim 2, Yoshinori discloses "communications terminal receiving frame data has a data reception time measurement and data transmission function" as a terminal that can recognize transfer rate (time measurement) and notify transmitting terminal of conditions (pg. 5 paragraph 10).

Regarding claim 11 depending from claim 2, Yoshinori discloses "maintain a constant quality of said frame data to be transmitted such that [...] the picture and sound reproduced from said frame data are recognizable" as generating coding conditions which suit real-time reproduction of data (pg. 6 paragraph 14), successfully reproducing the data inherently includes that the data can be recognized.

Regarding claim 12 depending from claim 2, Yoshinori inherently discloses "said picture quality is given by the data compression rate and picture size" as encoding an image of a certain screen size (pg. 5 paragraph 10) the quality will necessarily be dependent upon the original size and the amount of compression used, and "said sound quality is given by the data compression rate of relevant sound data" the same is true for sound data.

Claim Rejections - 35 USC § 103

16. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

17. Claims 1,3-5 and 11-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yoshinori in view of Barham et al. US2004/0003107 A1.

Regarding claim 1, Yoshinori does not specifically disclose "determining the degree of congestion of said data circuit from the data transmission time" however this is taught by Barham as measuring network capacity by measuring transmission time (col. 2 paragraph 13). The remainder of claim 1 is the same as claim 2 and is therefore rejected for the same reasons.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Yoshinori with Barham. The motivation is to rapidly detect network congestion, by measuring transmit time instead of receive time one is able to get a congestion measurement immediately rather than waiting for the data to be received.

Regarding claim 3, Yoshinori does not disclose "calculating a ratio (data reception time)/(data transmission time) [and determining the degree of congestion from said ratio]" but Yoshinori does teach using data reception time and transfer rate to calculate congestion (pg. 5 paragraph 10) and Barham teaches using data transmission time to detect network load (pg. 2 paragraph 13). It would have been obvious to combine the two to use both measurements to measure network congestion, the motivation is to constantly measure network load instead of just at the transmitting or receiving end.

Regarding claim 4 depending from claims 1 or 3, Yoshinori discloses "communications terminal receiving frame data has a data reception time measurement

Art Unit: 2109

and data transmission function” as a terminal that can recognize transfer rate (time measurement) and notify transmitting terminal of conditions (pg. 5 paragraph 10).

Regarding claim 5, Yoshinori does not disclose “data transmission time is the time interval from the beginning of the transmission of data frame that precedes the current data frame by at least one frame and the end of said transmission” however this is taught by Barham as measuring the interval from the time the packet is sent to the network to the time transmission is completed (pg. 2 paragraph 13).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Yoshinori with Barham. The motivation is to rapidly detect network congestion.

Regarding claim 11 depending from claim 1 or 3, Yoshinori discloses “maintain a constant quality of said frame data to be transmitted such that [...] the picture and sound reproduced from said frame data are recognizable” as generating coding conditions which suit real-time reproduction of data (pg. 6 paragraph 14), successfully reproducing the data inherently includes that the data can be recognized.

Regarding claim 12 depending from claim 1 or 3, Yoshinori inherently discloses “said picture quality is given by the data compression rate and picture size” as encoding an image of a certain screen size (pg. 5 paragraph 10) the quality will necessarily be

Art Unit: 2109

dependent upon the original size and the amount of compression used, and "said sound quality is given by the data compression rate of relevant sound data" the same is true for sound data.

18. Claims 6 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yoshinori in view of Takahara et al. U.S. Pat. 5,477,542.

Regarding claim 6, Yoshinori does not disclose "data reception time is the time interval from the beginning of the reception of data frame that precedes the current data frame by at least one frame and the end of said reception" however this is taught by Takahara as a received packet transmission time (col. 6 ln. 40-52).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Yoshinori with Takahara. The motivation to combine is to detect network congestion.

Regarding claim 10 depending from claim 2, Yoshinori does not disclose "data communications terminal prioritizes the sound quality over the frame rate" however this is taught by Takahara as maintaining voice data when the network is congested by lowering video data, thus maintaining frame rate for audio data (col. 2 ln. 12-38).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Yoshinori with Takahara. The motivation to combine is to maintain a minimum quality of data such that the transmission is useful.

19. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yoshinori in view of Barham and in further view of Takahara.

Regarding claim 10 depending from claim 1 or 3, Yoshinori and Barham disclose the limitations of claims 1 and 3 but do not disclose "data communications terminal prioritizes the sound quality over the frame rate" however this is taught by Takahara as maintaining voice data when the network is congested by lowering video data, thus maintaining frame rate for audio data (col. 2 ln. 12-38).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Yoshinori and Barham with the Takahara. The motivation to combine is to maintain a minimum quality of data such that the transmission is useful.

20. Claims 7 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yoshinori in view of Barham and in further view of Brabson et al. US2003/0135638 A1.

Regarding claim 7, Yoshinori discloses a data communications terminal that will "make a determination that the degree of congestion of said data circuit has

increased [...] when said data transmission time is increasing, thereby transmitting the next data frame with [...] a reduced picture size, and/or a reduced frame rate" as generating coding conditions, such as frame rate and screen size, which suit reproduction of data (pg. 5 paragraph 10), and "make a determination that the degree of congestion of said data circuit has decreased [...] thereby transmitting the next data frame with reduced data compression rate, an increased picture size, and/or an increased frame rate" as generating coding conditions which suit reproduction of data (pg. 5 paragraph 10). Yoshinori and Barham do not disclose transmitting data "with an increased data compression rate" or "reduced data compression rate" in response to network congestion, however this is taught by Brabson as transcoding a file in response to network conditions (pg. 4 paragraph 46) and doing the opposite when network conditions improve (pg. 3 paragraph 42, pg. 11 paragraph 127).

It would have been obvious for one of ordinary skill in the art at the time of the invention to modify Yoshinori with Brabson, the motivation for doing so is to avoid network congestion.

Regarding claim 9, Yoshinori discloses a data communications terminal that will "make a determination that the degree of congestion of said data circuit has increased [...] when said ratio (data reception time)/(data transmission time) is increasing, thereby transmitting the next data frame with [...] a reduced picture size, and/or a reduced frame rate" as generating coding conditions, such as frame rate and screen size, which suit

reproduction of data (pg. 5 paragraph 10), and “make a determination that the degree of congestion of said data circuit has decreased [...] thereby transmitting the next data frame with reduced data compression rate, an increased picture size, and/or an increased frame rate” as generating coding conditions which suit reproduction of data (pg. 5 paragraph 10). Yoshinori and Barham do not disclose transmitting data “with an increased data compression rate” or “reduced data compression rate” in response to network congestion, however this is taught by Brabson as transcoding a file in response to network conditions (pg. 4 paragraph 46) and doing the opposite when network conditions improve (pg. 3 paragraph 42, pg. 11 paragraph 127).

It would have been obvious for one of ordinary skill in the art at the time of the invention to modify Yoshinori with Brabson, the motivation for doing so is to avoid network congestion.

21. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yoshinori in view of Brabson.

Regarding claim 8, Yoshinori discloses a data communications terminal that will “make a determination that the degree of congestion of said data circuit has increased [...] when said data transmission time is increasing, thereby transmitting the next data frame with [...] a reduced picture size, and/or a reduced frame rate” as generating coding conditions, such as frame rate and screen size, which suit reproduction of data

Art Unit: 2109

(pg. 5 paragraph 10), and “make a determination that the degree of congestion of said data circuit has decreased [...] thereby transmitting the next data frame with reduced data compression rate, an increased picture size, and/or an increased frame rate” as generating coding conditions which suit reproduction of data (pg. 5 paragraph 10).

Yoshinori does not disclose transmitting data “with an increased data compression rate” or “reduced data compression rate” in response to network congestion, however this is taught by Brabson as transcoding a file in response to network conditions (pg. 4 paragraph 46) and doing the opposite when network conditions improve (pg. 3 paragraph 42, pg. 11 paragraph 127).

It would have been obvious for one of ordinary skill in the art at the time of the invention to modify Yoshinori with Brabson, the motivation for doing so is to avoid network congestion.

Conclusion

22. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Fukuda JP 2000-332829 discloses a receiving unit controlling a transmitting unit in real-time.

Waclawsky et al. U.S. Pat. 6,628,610 B1 discloses controlling packet flow using reply signals.

Art Unit: 2109

Kinrot U.S. Pat. 6,574,193 B1 discloses encoding packets based upon the degree of congestion.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason Recek whose telephone number is (571) 270-1975. The examiner can normally be reached on Mon - Thurs 7:30am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frantz Coby can be reached on (571) 272-4017. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Jason Recek
7/12/07


FRANTZ COBY
SUPERVISORY PATENT EXAMINER